RECEIVED

DEC 0 4 2002

1638



1600

TECH CENTER 1600/2900 -

RAW SEQUENCE LISTING DATE: 11/21/2002 PATENT APPLICATION: US/09/899,645A TIME: 10:13:03

Input Set : A:\5718-111.app

Output Set: N:\CRF4\11212002\I899645A.raw

```
3 <110> APPLICANT: Li, Chun Ping
         Zheng, Peizhong
         Nichols, Scott
 7 <120> TITLE OF INVENTION: METHODS FOR REGULATING BETA-OXIDATION IN PLANTS
 9 <130> FILE REFERENCE: 35718/235742
11 <140> CURRENT APPLICATION NUMBER: 09/899,645A
12 <141> CURRENT FILING DATE: 2001-07-05
14 <150> PRIOR APPLICATION NUMBER: 60/216,211
15 <151> PRIOR FILING DATE: 2000-07-06
17 <160> NUMBER OF SEQ ID NOS: 8
19 <170> SOFTWARE: PatentIn Ver. 2.1
21 <210> SEQ ID NO: 1
22 <211> LENGTH: 1169
23 <212> TYPE: DNA
                                                              ENTERED
24 <213> ORGANISM: Zea mays
26 <220> FEATURE:
27 <221> NAME/KEY: CDS
28 <222> LOCATION: (89)..(814)
30 <400> SEQUENCE: 1
31 gageteeace geggtggegg eegetetaga actagtggat eeeeeggget geaggaatte 60
33 ggcacgagag actgttgatt gtctaaaa atg gtg cat agt ttg cat gca att
                                  Met Val His Ser Leu His Ala Ile
35
37 ttt ctt gtt gct gga gac aat aac ata ccg ata ata tat caa gtt cat
38 Phe Leu Val Ala Gly Asp Asn Asn Ile Pro Ile Ile Tyr Gln Val His
41 cgg gca cgt gat gga tcc agc ttt gcc aca aga aaa gtg gag gca aag
                                                                     208
42 Arg Ala Arg Asp Gly Ser Ser Phe Ala Thr Arg Lys Val Glu Ala Lys
43 25
                        30
                                            35
45 cag aag ggc cta gtt gta ttc acc ttg att gct tct ttc cag aag gaa
                                                                     256
46 Gln Lys Gly Leu Val Val Phe Thr Leu Ile Ala Ser Phe Gln Lys Glu
                   45
                                       50
49 gaa gtg ggt ttt gag cat cag gct gca atc atg cct qat gtt cct ccq
                                                                     304
50 Glu Val Gly Phe Glu His Gln Ala Ala Ile Met Pro Asp Val Pro Pro
                                    65
53 cca gaa cag ctc ctt aat ctg gag gag ata cgt gaa aga cgg ctt act
54 Pro Glu Gln Leu Leu Asn Leu Glu Glu Ile Arg Glu Arg Arg Leu Thr
57 gat cca cgc ttc cca tcc caa tat agg aac ttg gca gct aaa aaa aag
                                                                     400
58 Asp Pro Arg Phe Pro Ser Gln Tyr Arg Asn Leu Ala Ala Lys Lys Lys
61 ttt att cct tgg ccc ata gaa atg aga ttt tgt gaa ggt tca gcg tct
                                                                     448
```

62 Phe Ile Pro Trp Pro Ile Glu Met Arg Phe Cys Glu Gly Ser Ala Ser

Input Set : A:\5718-111.app

63 105					110					115					120	
65 caa																496
66 Glr	n His	Lys	Pro		Leu	Asn	Tyr	Trp		Arg	Ala	Arg	Gly	-	Leu	
67				125					130					135		
69 tca																544
70 Ser	Asp	Asp		Ala	Leu	His	Arg	_	Val	Val	Ala	Tyr		Ser	Asp	
71			140					145					150			500
73 cta																592
74 Let 75	ı ren	155	Ser	СТА	vaı	ser	160	Asn	Pro	HIS	Arg		гàг	GIŸ	Leu	
77 aag	, 202		tac	ctc	201	o++		0.0+	+ 00	2 t 0	+ ~ ~	165	000	222	aat	640
78 Lys																040
70 Lys	170	тут	Cys	пеп	Set	175	тэр	1112	Ser	TIE	180	rne	птэ	гуз	FIO	
81 gtg		act	gac	gaa	taa	_	cta	tat	ata	atc		anc	cca	tct	aca	688
82 Val																000
83 185		1114	110p	014	190	1100	шеч	- y -	vai	195	014	DCI	110	561	200	
85 cac		aat	cac	aat	ttc	atc	acc	aga	cac		ttc	aac	agg	caa		736
86 His																
87	-	-	_	205				_	210				,	215		
89 gag	ctt	atc	atg	tcg	ctg	acc	caa	gag	gca	ttg	att	cga	agg	gag	aag	784
90 Gl:	Leu	Ile	Met	Ser	Leu	Thr	Gln	Glu	Ala	Leu	Ile	Arg	Arg	Glu	Lys	
91			220					225					230			
93 ccg										tgag	ggcad	cct q	gaca	gcct	ct	834
94 Pro	Arg	Gly	Pro	Asn	Pro	Arg	Pro	Lys	Leu							
						_		-								
95		235				_	240									
97 gca		act o					gago		gaga						ctaat	
97 gca 99 ttg	gttta	act q aga t	attt	atga	aa tt	caca	gago	aaa	gaga atat	aga	atat	caaq	gca q	gtata	aaaga	954
97 gca 99 ttg 101 tc	gttta :tcaaq	act q aga t gtca	attt aacc	atga ctaac	a tt	caca	egago aaca ttca	a aaa at tt	gaga aatat	aga ggat	atat gat	caaq	gca (gtata tgti	aaaaga ttggt	954 g 1014
97 gca 99 ttg 101 to 103 tg	gttta tcaaq tgtgt	act q aga t gtca :ggt	attt aaco tgga	atga ctaac agggg	na tt cat t gta t	caca tttt tgga	gago laaca ttca lagco	aaa ut tt gg aa	gaga aatat cctco	aga ggat gaggo	atat gat gga	caaq ttct agggt	gca (att ttg	gtata tgti atao	aaaaga tttggto	954 g 1014 g 1074
97 gca 99 ttg 101 tc 103 tg 105 ct	gttta tcaaq tgtgt attt	act gaga tytea	attt aaco tgga cago	atga ctaac agggg cttac	na tt cat t gta t ctt t	caca tttt tgga catt	gago laaca ttca lagco latao	aaa ut tt gg aa cg aa	gaga aatat ctco agcgo acagt	aga ggat gaggo	atat gat gga	caaq ttct agggt	gca (att ttg	gtata tgti atao	aaaaga ttggt	954 g 1014 g 1074 a 1134
97 gca 99 ttg 101 tc 103 tg 105 ct 107 aa	gttta tcaaq tgtgt attt aaaaa	act gaga type to the second se	aattt aaco tgga cago aaaa	atga taad agggo cttad actco	na tt cat t gta t ctt t	caca tttt tgga catt	gago laaca ttca lagco latao	aaa ut tt gg aa cg aa	gaga aatat ctco agcgo acagt	aga ggat gaggo	atat gat gga	caaq ttct agggt	gca (att ttg	gtata tgti atao	aaaaga tttggto	954 g 1014 g 1074
97 gca 99 ttg 101 tc 103 tg 105 ct	gttta tcaaq tgtgt attto aaaaa 10> 3	act gaga togtca cotg	aattt aacc tgga cagc aaaa ID NC	tatga etaac agggg ettac ettec etce etce etce etce	na tt cat t gta t ctt t	caca tttt tgga catt	gago laaca ttca lagco latao	aaa ut tt gg aa cg aa	gaga aatat ctco agcgo acagt	aga ggat gaggo	atat gat gga	caaq ttct agggt	gca (att ttg	gtata tgti atao	aaaaga tttggto	954 g 1014 g 1074 a 1134
97 gca 99 ttg 101 tc 103 tg 105 ct 107 aa 110 <2	gttta tcaaq tgtgt attta aaaaa 10> 3	act of aga to get categorian t	aattt aacc tgga cagc aaaa ID NC	tatga taac agggg ttac actco : 2	na tt cat t gta t ctt t	caca tttt tgga catt	gago laaca ttca lagco latao	aaa ut tt gg aa cg aa	gaga aatat ctco agcgo acagt	aga ggat gaggo	atat gat gga	caaq ttct agggt	gca (att ttg	gtata tgti atao	aaaaga tttggto	954 g 1014 g 1074 a 1134
97 gca 99 ttg 101 tc 103 tg 105 ct 107 aa 110 <2 111 <2	gtttagtgt tcaag tgtgtgt attto aaaaa 10> 3 11> 1	act of aga to get categorian t	attt aacc tgga cagc aaaa ID NC TH: 2	atga etaac agggg ettac actco : 2 242	aa tt cat t gta t ctt t gag o	caca tttt tgga catt ggggg	gago laaca ttca lagco latao	aaa at tt gg aa cg aa	gaga aatat ctco agcgo acagt	aga ggat gaggo	atat gat gga	caaq ttct agggt	gca (att ttg	gtata tgti atao	aaaaga tttggto	954 g 1014 g 1074 a 1134
97 gca 99 ttg 101 tc 103 tg 105 ct 107 aa 110 <2 111 <2 112 <2	rgttta tcaad tgtgt atttd aaaaa 10> S 11> I 12> S	act of aga to get categories of the get cate	aattt aacc tgga cagc aaaa ID NC IH: 2 PRI	atga etaac agggg ettac actco ectco 242 242	aa tt cat t gta t ctt t gag o	caca tttt tgga catt ggggg	gago laaca ttca lagco latao	aaa at tt gg aa cg aa	gaga aatat ctco agcgo acagt	aga ggat gaggo	atat gat gga	caaq ttct agggt	gca (att ttg	gtata tgti atao	aaaaga tttggto	954 g 1014 g 1074 a 1134
97 gca 99 ttg 101 tc 103 tg 105 ct 107 aa 110 <2 111 <2 112 <2 113 <2	gtttaggttgggatttagggatttagggatttagggatttagggatttagggatttagggattgggattgggatgggatgggatgggatgggatgggatgggatgggatgg	act of aga to great grea	aacc tgga cagc aaaa ID NC IH: 2 : PRI NISM:	tatga ettac agggg ettac actco actco 242 242 Zea 2	na the cat the	caca tttt ttgga catt ggggg	cgago laaca ttca lagoo latao	n aaa nt tt ng aa ng aa ng gt	cgaga aatat cctco agcgo acagt	aga eggat gaggo eatat	atat gat gga gga	ccaaq cttct agggt acata	gca (tatt ttg attt	gtata tgti atao aaao	aaaaga ttggtg ctttagg	954 g 1014 g 1074 a 1134
97 gca 99 ttg 101 tc 103 tg 105 ct 107 aa 110 <2 111 <2 112 <2 113 <2 115 <4 116 Me 117	rgttta etcaag rtgtgt attto aaaaa 110> 5 11> 1 12> 5 13> 0 00> 5 t Val	act q aga t gtca ggt cctg aaaa SEQ I LENGI TYPE: DRGAN SEQUE L His	tattt aacc tgga cagc aaaa ID NC IH: 2 PRI NISM: ENCE: S Ser	tatga etaac agggo ettac actco 242 Zea Zea 2 Leu	na tt cat t cat t gta t ctt t gag c n may	ccaca tttt ttgga ccatt ggggg	cgago aaaca ttca aagco atao ggcco	a aaa at tt gg aa cg aa cg gt	gaga aatat cetec agego cagt ace	aga eggat gagge catat val	atat gat gga ata	ccaaq cttct agggt acata	gca g att attg attt	gtata tgtt atao aaao Asr	aaaaga ttggtg ctttagg cttcaaa	954 g 1014 g 1074 a 1134
97 gca 99 ttg 101 tc 103 tg 105 ct 107 aa 110 <2 111 <2 113 <2 115 <4 116 Me 117 119 II	rgttta etcaag rtgtgt attto aaaaa 110> 5 11> 1 12> 5 13> 0 00> 5 t Val	act q aga t gtca ggt cctg aaaa SEQ I LENGI TYPE: DRGAN SEQUE L His	tattt aacc tgga cagc aaaa ID NC IH: 2 PRI NISM: ENCE: S Ser	catga ctaac agggg cttac actco 2242 Zea Zea 2 Leu E Tyr	na tt cat t cat t gta t ctt t gag c n may	ccaca tttt ttgga ccatt ggggg	cgago aaaca ttca aagco atao ggcco	a aaa at tt gg aa cg aa cg gt	gaga aatat cetec agego cagt ace	aga eggat gagge catat val	atat gat gga ata	ccaaq cttct agggt acata	gca g att attg attt	gtata tgtt atao aaao Asr	aaaaga ttggtg ctttagg cttcaaa	954 g 1014 g 1074 a 1134
97 gca 99 ttg 101 tc 103 tg 105 ct 107 aa 110 <2 111 <2 113 <2 115 <4 116 Me 117 119 I1	rgttta etcaag ftgtgt attto aaaaa 10> S 11> I 12> 5 13> C 00> S t Val 1 e Pro	act quad to great the great gr	tattt aacc tgga cagc aaaa ID NC IH: 2: PRI NISM: ENCE: S Ser	catga ctaac agggg cttac actco 2242 Zea 2 Zea 2 Leu 5 Tyr	na the cat the	ccacacacacacacacacacacacacacacacacacac	egago aaaca ettca aagoo atao ggood	a aaa at tt gg aa cg aa cg gt e Phe Arg 25	gaga aatat cctco agcgg acagt acc	aga eggat gaggo catat u Val o a Aro	atat gat gga ata	ccaac cttct agggt acata a Gly	gca (statt statt) Asp Sen 30	tgtata tgta atao aaao Asr 15 Ser	aaaaga ttggtg ctttagg cttcaaa n Asn c Phe	954 g 1014 g 1074 a 1134
97 gca 99 ttg 101 tc 103 tg 105 ct 107 aa 110 <2 111 <2 113 <2 115 <4 116 Me 117 119 I1 120 122 Al	rgttta etcaag ftgtgt attto aaaaa 10> S 11> I 12> 5 13> C 00> S t Val 1 e Pro	act quaga tytea ty	tattt aacc tgga cagc aaaa ID NC FH: 2 FRT NISM: ENCE: S Ser 2 G Lys	catga ctaac agggg cttac actco 2242 Zea 2 Zea 2 Leu 5 Tyr	na the cat the	ccacacacacacacacacacacacacacacacacacac	egage aaaca ttca aagee atae ggcco	a aaa at tt gg aa cg aa cg gt e Phe 25 Gln	gaga aatat cctco agcgg acagt acc	aga eggat gaggo catat u Val o a Aro	atat gat gga ata	ccaag ttct agggt acata Gly Gly	y Asp 3 Ser 3 Val	tgtata tgta atao aaao Asr 15 Ser	aaaaga ttggtg ctttagg cttcaaa n Asn c Phe	954 g 1014 g 1074 a 1134
97 gca 99 ttg 101 tc 103 tg 105 ct 107 aa 110 <2 111 <2 113 <2 115 <4 116 Me 117 119 I1 120 122 Al 123	rgttta ttcaag ttgtgt aaaaaa 10> S 11> I 12> S 13> (00> S t Val 1 e Pro	act gaga tytea tyt	tattt aacc tgga cagc aaaa ID NC TH: 2 FRT NISM: ENCE: S Ser 2 G Lys	catgactaco agggg cttaco actco 242 Zea 2 Zea 2 Leu E Tyr	aa ttcat tgta tett tgag g	ccacacacacactttt	egago	a aaaat tt gg aa gg aa gg gt e Phe s Arg gg Gln	gaga aatat cctco agcgg acagt acc 10 Ala	aga eggat gaggo catat ' Val) a Aro	atat gat gga ata L Ala J Asp	ccaag ttct agggt acata Gly OGly 1 Val	y Asp 3 (Val)	tgtata tgta atao aaao Asr 15 Ser	n Asn	954 g 1014 g 1074 a 1134
97 gca 99 ttg 101 tc 103 tg 105 ct 107 aa 110 <2 111 <2 113 <2 115 <4 116 Me 117 119 I1 120 122 Al 123 125 Le	rgttta tcaag tgtgt aaaaaa 10> S 11> I 12> S 13> (00> S t Val 1 e Pro	act gaga tgtca tgtca tggt cctg aaaa EEQ ITYPE: DRGAN SEQUEL His SE	tattt aacc tgga cagc aaaa ID NC TH: 2 FRT NISM: ENCE: S Ser 2 G Lys	catgactaco agggg cttaco actco 242 Zea 2 Zea 2 Leu E Tyr	aa ttcat tgta tett tgag g	ccacacacacacacacacacacacacacacacacacac	egago	a aaaat tt gg aa gg aa gg gt e Phe s Arg gg Gln	gaga aatat cctco agcgg acagt acc 10 Ala	aga eggat gaggo catat ' Val) a Aro	atate gate ggate ata	ccaac cttct agggt acata Gly Val 45 e Glu	y Asp 3 (Val)	tgtata tgta atao aaao Asr 15 Ser	n Asn	954 g 1014 g 1074 a 1134
97 gca 99 ttg 101 tc 103 tg 105 ct 107 aa 110 <2 111 <2 113 <2 115 <4 116 Me 117 119 I1 120 122 Al 123 125 Le 126	rgttta tcaag tgtgt aaaaa 10> S 11> I 12> S 13> (00> S t Val 1 e Pro	act of again to a graduate a grad	tattt aacc tgga cagc aaaa ID NC TH: 2 PRT NISM: ENCE: S Ser 2 G Lys a Ser	catgactaccagggggcttaccactcgc: 2 242 Zea 2 Leu 2 Tyr 3 Val	aa tt cat t gta t ctt t gag c n may n His Glr c Glr	ccacacacacactttt ctgga ccatt ggggg /s Ala Nala Lys 55	egago	a aaaat tt gg aa cg aa cg gt e Phe S Arg 25 S Gln	Egaga aatat cctco agcgo acagt cacc Let 10 Ala b Lys	aga cggat gaggc catat Arc Gly	atate gate ggate ata	ccaac cttct agggt acata Gly Val 45 e Glu	y Asp y Sen 30 Validation	tgtata tgta atao aaao D Asr 15 Ser) L Phe	n Asn or Phe e Thr	954 g 1014 g 1074 a 1134
97 gca 99 ttg 101 tc 103 tg 105 ct 107 aa 110 <2 111 <2 113 <2 115 <4 116 Me 117 119 II 120 122 Al 123 125 Le 126 128 Al	rgttta tcaag tgtgt aattc aaaaa 10> S 11> I 12> S 13> (00> S t Val 1 e Pro a Thr	act of again to a graduate a grad	tattt aacc tgga cagc aaaa ID NC TH: 2 PRT NISM: ENCE: S Ser 2 G Lys a Ser	catgactaccagggggcttaccactcgc: 2 242 Zea 2 Leu 2 Tyr 3 Val	ma the cat to grant to the cat to	ccacacacactttt ctggaacact gggggg /s Ala Nala Lys 55	egago	a aaaat tt gg aa cg aa cg gt e Phe S Arg 25 S Gln	Egaga aatat cctco agcgo acagt cacc Let 10 Ala b Lys	aga cggat gaggc catat Val Arc Gly Gly	atate gate ggate ata	ccaac cttct agggt acata Gly Val 45 e Glu	y Asp y Sen 30 Validation	tgtata tgta atao aaao D Asr 15 Ser) L Phe	n Asn c Phe e Thr	954 g 1014 g 1074 a 1134
97 gca 99 ttg 101 tc 103 tg 105 ct 107 aa 110 <2 111 <2 113 <2 115 <4 116 Me 117 119 I1 120 122 Al 123 125 Le 126 128 Al 129 6	rgttta tcaag tgtgt aattt aaaaa 10> S 11> I 12> S 13> (00> S t Val 1 e Pro a Thr	act gaga to gaga to gaga to gaga as ga	tattt aacc tgga cagc aaaa ID NC TH: 2: PRI NISM: ENCE: E Ser Lys A Ser	tatgattaadagggggettacactcol: 2 242 2	a ticat to the tic	ccacacacacactttt	egago	a aaaaat tt gg aaa gg aaa gg gt e Phe 25 Gln g Glu o Pro	Egaga atat cctco agcgo acagt acc l Ala b Lys Val	aga cggat gaggc atat Val Arc Gly Gly	atate gate ggate ata	a Gly Val 45 Gly Let	y Asp y Sep y Val on His	tgtata tgta atac aaac Asr 15 Ser) Phe	n Asn Fr Phe Thr n Ala	954 g 1014 g 1074 a 1134
97 gca 99 ttg 101 tc 103 tg 105 ct 107 aa 110 <2 111 <2 112 <2 113 <2 115 <4 116 Me 117 119 I1 120 122 Al 123 125 Le 126 128 Al 129 6 131 Gl	rgttta tcaag tgtgt aattt aaaaa 10> S 11> I 12> S 13> (00> S t Val 1 e Pro a Thr	act gaga to gaga to gaga to gaga as ga	tattt aacc tgga cagc aaaa ID NC TH: 2: PRI NISM: ENCE: E Ser Lys A Ser	tatgattaacatgaggggcttacatgattacatgaggggcttacatgattacat	a may a His Glr Glr Val Arg	ccacacacacactttt	egago	a aaaaat tt gg aaa gg aaa gg gt e Phe 25 Gln g Glu o Pro	Egaga atat cctco agcgg acagt cacc Let 10 Ala b Lys Val	aga cggat gaggc atat Val Arc Gly Gly Arc Arc	atate gate ggate ata	a Gly Val 45 Gly Let	y Asp y Sep y Val on His	tgtata tgta atac aaac Asr 15 Ser Phe Glr	n Asn or Phe or Thr or Ala or Glu or Tyr	954 g 1014 g 1074 a 1134
97 gca 99 ttg 101 tc 103 tg 105 ct 107 aa 110 <2 111 <2 113 <2 115 <4 116 Me 117 119 I1 120 122 Al 123 125 Le 126 128 Al 129 6	transport to the street of the	act caga to great the great sector of the grea	aactt aacc tgga cagc aaaa ID NC III PRI NISM: ENCE: Ser 20 Lys a Ser II Pro	tatgattaacatgaggggcttacatgattacatgaggggcttacatgattacat	ma the state of th	ccacacacactttt ctggaacactt ggggg vs s Ala n Val n Ala n Lys pro	egago	a aaaaat tt gg aaa eg aa eg gt e Phe a Arg a Glu b Pro	Egaga atat actco agcage acagt acc l 10 g Ala b Clu b Pro 90	aga cggat gaggc atat Val a Arc Gly Gly Arc	atate gate ggate atate ggate atate ggate atate ggate g	a Gly Calcada	y Asp y Sen y Sen y Sen Sen y Sen	tgtata tgta atac aaac Asr 15 Ser Phe Glr Leu	n Asn or Phe or Thr or Ala or Glu or Tyr	954 g 1014 g 1074 a 1134

Input Set : A:\5718-111.app

				100					105					110			
135	7)	Dha	C	100	C1	C = 10	7.1.	C	105	17.5 -	T	D	C	110	70	m	
	Arg	rne		GIU	GTÀ	ser	Ата		GIN	HIS	ьys	Pro		ьeu	ASN	Tyr	
138	_	D)	115	7. 2	_	63		120	_	_	_	- 1	125	_		_	
	Trp		Arg	Ala	Arg	GLY		Leu	Ser	Asp	Asp		Ala	Leu	His	Arg	
141		130					135					140					
143	Cys	Val	Val	Ala	Tyr	Ala	Ser	Asp	Leu	Leu	Phe	Ser	Gly	Val	Ser	Leu	
	145					150					155					160	
146	Asn	Pro	His	Arg	Glu	Lys	Gly	Leu	Lys	Thr	Tyr	Cys	Leu	Ser	Leu	Asp	
147					165					170					175		
149	His	Ser	Ile	Trp	Phe	His	Lys	Pro	Val	Lys	Ala	Asp	Glu	Trp	Met	Leu	
150				180					185					190			
152	Tyr	Val	Ile	Glu	Ser	Pro	Ser	Ala	His	Gly	Gly	Arg	Gly	Phe	Val	Thr	
153			195					200					205				
155	Gly	Arg	Met	Phe	Asn	Arg	Gln	Gly	Glu	Leu	Ile	Met	Ser	Leu	Thr	Gln	
156		210				-	215	_				220					
158	Glu	Ala	Leu	Ile	Arq	Arq	Glu	Lys	Pro	Arq	Gly	Pro	Asn	Pro	Arq	Pro	
	225					230		-		_	235				,	240	
	Lys	Leu															
	<210		EO II	ON C	: 3												
	<213																
	<212				50												
	<213				Home	n sar	niens	3									
	<220				1101110	<i>5</i> 54 ₁	J1 C11.	,									
	<22				CDS												
						/ 91	571										
1,0	~~~	2/ 110	JUAI .	LOIV.	(1 /	(1)(957)											
175	<100	7> <1	COUR	JCF.	3												
	<400					acc	CC3	a 22	ast	~~~	626	999	t at	aac	~ 2.6	666	<i>1</i> Q
176	atg	tcg	tcc	ccg	cag												48
176 177	atg Met	tcg	tcc	ccg	cag Gln					Gly					Asp		48
176 177 178	atg Met 1	tcg Ser	tcc Ser	ccg Pro	cag Gln 5	Ala	Pro	Glu	Asp	Gly 10	Gln	Gly	Cys	Gly	Asp 15	Arg	
176 177 178 180	atg Met 1 ggc	tcg Ser gat	tcc Ser ccc	ccg Pro	cag Gln 5 ggg	Ala gac	Pro ctc	Glu cgt	Asp	Gly 10 gtc	Gln ttg	Gly	Cys	Gly	Asp 15 gtg	Arg	48 96
176 177 178 180 181	atg Met 1	tcg Ser gat	tcc Ser ccc	ccg Pro cct Pro	cag Gln 5 ggg	Ala gac	Pro ctc	Glu cgt	Asp agc Ser	Gly 10 gtc	Gln ttg	Gly	Cys	Gly acc Thr	Asp 15 gtg	Arg	
176 177 178 180 181 182	atg Met 1 ggc Gly	tcg Ser gat Asp	tcc Ser ccc Pro	ccg Pro cct Pro 20	cag Gln 5 ggg Gly	Ala gac Asp	Pro ctc Leu	Glu cgt Arg	Asp agc Ser 25	Gly 10 gtc Val	Gln ttg Leu	Gly gtc Val	Cys acg Thr	Gly acc Thr 30	Asp 15 gtg Val	Arg ctc Leu	96
176 177 178 180 181 182 184	atg Met 1 ggc Gly aac	tcg Ser gat Asp	tcc Ser ccc Pro	ccg Pro cct Pro 20 ccg	cag Gln 5 ggg Gly ctg	Ala gac Asp gac	Pro ctc Leu gag	Glu cgt Arg gat	Asp agc Ser 25 ctc	Gly 10 gtc Val ttc	Gln ttg Leu aga	Gly gtc Val gga	Cys acg Thr	Gly acc Thr 30 cat	Asp 15 gtg Val tac	Arg ctc Leu tgg	
176 177 178 180 181 182 184 185	atg Met 1 ggc Gly	tcg Ser gat Asp	tcc Ser ccc Pro gag Glu	ccg Pro cct Pro 20 ccg	cag Gln 5 ggg Gly ctg	Ala gac Asp gac	Pro ctc Leu gag	Glu cgt Arg gat Asp	Asp agc Ser 25 ctc	Gly 10 gtc Val ttc	Gln ttg Leu aga	Gly gtc Val gga	Cys acg Thr agg Arg	Gly acc Thr 30 cat	Asp 15 gtg Val tac	Arg ctc Leu tgg	96
176 177 178 180 181 182 184 185	atg Met 1 ggc Gly aac Asn	tcg Ser gat Asp ctc Leu	tcc Ser ccc Pro gag Glu 35	ccg Pro cct Pro 20 ccg Pro	cag Gln 5 ggg Gly ctg Leu	Ala gac Asp gac Asp	Pro ctc Leu gag Glu	Glu cgt Arg gat Asp 40	Asp agc Ser 25 ctc Leu	Gly 10 gtc Val ttc Phe	Gln ttg Leu aga Arg	Gly gtc Val gga Gly	Cys acg Thr agg Arg 45	Gly acc Thr 30 cat His	Asp 15 gtg Val tac Tyr	Arg ctc Leu tgg Trp	96 144
176 177 178 180 181 182 184 185 186	atg Met 1 ggc Gly aac Asn	tcg Ser gat Asp ctc Leu ccg	tcc Ser ccc Pro gag Glu 35 gcc	ccg Pro cct Pro 20 ccg Pro	cag Gln 5 ggg Gly ctg Leu	Ala gac Asp gac Asp ctg	Pro ctc Leu gag Glu ttt	cgt Arg gat Asp 40 ggt	Asp agc Ser 25 ctc Leu ggt	Gly 10 gtc Val ttc Phe	Gln ttg Leu aga Arg	Gly gtc Val gga Gly gtg	Cys acg Thr agg Arg 45 ggc	Gly acc Thr 30 cat His cag	Asp 15 gtg Val tac Tyr	Arg ctc Leu tgg Trp ctg	96
176 177 178 180 181 182 184 185 186 188	atg Met 1 ggc Gly aac Asn	tcg Ser gat Asp ctc Leu ccg Pro	tcc Ser ccc Pro gag Glu 35 gcc	ccg Pro cct Pro 20 ccg Pro	cag Gln 5 ggg Gly ctg Leu	Ala gac Asp gac Asp ctg	Pro ctc Leu gag Glu ttt Phe	cgt Arg gat Asp 40 ggt	Asp agc Ser 25 ctc Leu ggt	Gly 10 gtc Val ttc Phe	Gln ttg Leu aga Arg	Gly gtc Val gga Gly gtg Val	Cys acg Thr agg Arg 45 ggc	Gly acc Thr 30 cat His cag	Asp 15 gtg Val tac Tyr	Arg ctc Leu tgg Trp ctg	96 144
176 177 178 180 181 182 184 185 186 188 189	atg Met 1 ggc Gly aac Asn gta Val	tcg Ser gat Asp ctc Leu ccg Pro 50	tcc Ser ccc Pro gag Glu 35 gcc Ala	ccg Pro cct Pro 20 ccg Pro aag Lys	cag Gln 5 ggg Gly ctg Leu agg Arg	Ala gac Asp gac Asp ctg Leu	Pro ctc Leu gag Glu ttt Phe 55	cgt Arg gat Asp 40 ggt Gly	Asp agc Ser 25 ctc Leu ggt Gly	Gly 10 gtc Val ttc Phe cag Gln	Gln ttg Leu aga Arg atc Ile	Gly gtc Val gga Gly gtg Val 60	Cys acg Thr agg Arg 45 ggc Gly	Gly acc Thr 30 cat His cag Gln	Asp 15 gtg Val tac Tyr gcc Ala	Arg ctc Leu tgg Trp ctg Leu	96 144 192
176 177 178 180 181 182 184 185 186 188 190 192	Met 1 ggc Gly aac Asn gta Val	ser gat Asp ctc Leu ccg Pro 50 gct	ccc Pro gag Glu 35 gcc Ala	ccg Pro cct Pro 20 ccg Pro aag Lys	cag Gln 5 ggg Gly ctg Leu agg Arg	Ala gac Asp gac Asp ctg Leu tct	Pro ctc Leu gag Glu ttt Phe 55 gtg	cgt Arg gat Asp 40 ggt Gly	Asp agc Ser 25 ctc Leu ggt Gly	Gly 10 gtc Val ttc Phe cag Gln gac	Gln ttg Leu aga Arg atc Ile gtc	Gly gtc Val gga Gly gtg Val 60 cac	Cys acg Thr agg Arg 45 ggc Gly	Gly acc Thr 30 cat His cag Gln cac	Asp 15 gtg Val tac Tyr gcc Ala	Arg ctc Leu tgg Trp ctg Leu ctg	96 144
176 177 178 180 181 182 184 185 186 188 189 190 192 193	Met 1 ggc Gly aac Asn gta Val gtg Val	ser gat Asp ctc Leu ccg Pro 50 gct	ccc Pro gag Glu 35 gcc Ala	ccg Pro cct Pro 20 ccg Pro aag Lys	cag Gln 5 ggg Gly ctg Leu agg Arg	Ala gac Asp gac Asp ctg Leu tct Ser	Pro ctc Leu gag Glu ttt Phe 55 gtg	cgt Arg gat Asp 40 ggt Gly	Asp agc Ser 25 ctc Leu ggt Gly	Gly 10 gtc Val ttc Phe cag Gln gac	Cln ttg Leu aga Arg atc Ile gtc Val	Gly gtc Val gga Gly gtg Val 60 cac	Cys acg Thr agg Arg 45 ggc Gly	Gly acc Thr 30 cat His cag Gln cac	Asp 15 gtg Val tac Tyr gcc Ala	Arg ctc Leu tgg Trp ctg Leu ctg Leu	96 144 192
176 177 178 180 181 182 184 185 186 188 189 190 192 193 194	Met 1 ggc Gly aac Asn gta Val gtg Val 65	ser gat Asp ctc Leu ccg Pro 50 gct Ala	tcc Ser ccc Pro gag Glu 35 gcc Ala gca Ala	ccg Pro cct Pro 20 ccg Pro aag Lys gcc Ala	cag Gln 5 ggg Gly ctg Leu agg Arg	Ala gac Asp gac Asp ctg Leu tct Ser 70	Pro ctc Leu gag Glu ttt Phe 55 gtg Val	cgt Arg gat Asp 40 ggt Gly agt Ser	Asp agc Ser 25 ctc Leu ggt Gly gaa Glu	Gly 10 gtc Val ttc Phe cag Gln gac Asp	Gln ttg Leu aga Arg atc Ile gtc Val 75	gtc Val gga Gly gtg Val 60 cac His	Cys acg Thr agg Arg 45 ggc Gly gtg Val	Gly acc Thr 30 cat His cag Gln cac	Asp 15 gtg Val tac Tyr gcc Ala tcc Ser	Arg ctc Leu tgg Trp ctg Leu ctg Leu 80	96 144 192 240
176 177 178 180 181 182 184 185 186 188 189 190 192 193 194 196	Met 1 ggc Gly aac Asn gta Val gtg Val 65 cac	ser gat Asp ctc Leu ccg Pro gct Ala	ccc Pro gag Glu 35 gcc Ala gca Ala	ccg Pro cct Pro 20 ccg Pro aag Lys gcc Ala	cag Gln 5 ggg Gly ctg Leu agg Arg	Ala gac Asp gac Asp ctg Leu tct Ser 70 cgg	Pro ctc Leu gag Glu ttt Phe 55 gtg Val	Glu cgt Arg gat Asp 40 ggt Gly agt ser	Asp agc Ser 25 ctc Leu ggt Gly gaa Glu	Gly 10 gtc Val ttc Phe cag Gln gac Asp ccg	Gln ttg Leu aga Arg atc Ile gtc Val 75 aag	Gly gtc Val gga Gly gtg Val 60 cac His	Cys acg Thr agg Arg 45 ggc Gly gtg Val cca	Gly acc Thr 30 cat His cag Gln cac His	Asp 15 gtg Val tac Tyr gcc Ala tcc ser	Arg ctc Leu tgg Trp ctg Leu ctg Leu s0 tac	96 144 192
176 177 178 180 181 182 184 185 186 188 190 192 193 194 196 197	Met 1 ggc Gly aac Asn gta Val gtg Val 65	ser gat Asp ctc Leu ccg Pro gct Ala	ccc Pro gag Glu 35 gcc Ala gca Ala	ccg Pro cct Pro 20 ccg Pro aag Lys gcc Ala	cag Gln 5 ggg Gly ctg Leu agg Arg aag Lys	Ala gac Asp gac Asp ctg Leu tct Ser 70 cgg	Pro ctc Leu gag Glu ttt Phe 55 gtg Val	Glu cgt Arg gat Asp 40 ggt Gly agt ser	Asp agc Ser 25 ctc Leu ggt Gly gaa Glu	Gly 10 gtc Val ttc Phe cag Gln gac Asp ccg Pro	Gln ttg Leu aga Arg atc Ile gtc Val 75 aag	Gly gtc Val gga Gly gtg Val 60 cac His	Cys acg Thr agg Arg 45 ggc Gly gtg Val cca	Gly acc Thr 30 cat His cag Gln cac His	Asp 15 gtg Val tac Tyr gcc Ala tcc Ser ctg Leu	Arg ctc Leu tgg Trp ctg Leu ctg Leu s0 tac	96 144 192 240
176 177 178 180 181 182 184 185 186 189 190 192 193 194 196 197	Met 1 ggc Gly aac Asn gta Val gtg Val 65 cac His	ser gat Asp ctc Leu ccg Pro 50 gct Ala tgc Cys	ccc Pro gag Glu 35 gcc Ala gca Ala	ccg Pro cct Pro 20 ccg Pro aag Lys gcc Ala ttt	cag Gln 5 ggg Gly ctg Leu agg Arg aag Lys gtt Val 85	Ala gac Asp gac Asp ctg Leu tct Ser 70 cgg Arg	Pro ctc Leu gag Glu ttt Phe 55 gtg Val gca Ala	cgt Arg gat Asp 40 ggt Gly agt Ser	Asp agc Ser 25 ctc Leu ggt Gly gaa Glu gac Asp	Gly 10 gtc Val ttc Phe cag Gln gac Asp ccg Pro 90	Gln ttg Leu aga Arg atc Ile gtc Val 75 aag Lys	Gly gtc Val gga Gly gtg Val 60 cac His ctg Leu	Cys acg Thr agg Arg 45 ggc Gly gtg Val cca Pro	Gly acc Thr 30 cat His cag Gln cac His gta Val	Asp 15 gtg Val tac Tyr gcc Ala tcc Ser ctg Leu 95	Arg ctc Leu tgg Trp ctg Leu ctg Leu 80 tac Tyr	96 144 192 240 288
176 177 178 180 181 182 184 185 186 188 190 192 193 194 196 197 198 200	Met 1 ggc Gly aac Asn gta Val gtg Val 65 cac His caa	ser gat Asp ctc Leu ccg Pro 50 gct Ala tgc Cys	ccc Pro gag Glu 35 gcc Ala gca Ala tac Tyr	ccg Pro cct Pro ccg Pro aag Lys gcc Ala ttt Phe	cag Gln 5 ggg Gly ctg Leu agg Arg aag Lys gtt Val 85 aca	Ala gac Asp gac Asp ctg Leu tct Ser 70 cgg Arg	Pro ctc Leu gag Glu ttt Phe 55 gtg Val gca Ala aca	cgt Arg gat Asp 40 ggt Gly agt Ser ggg	Asp agc Ser 25 ctc Leu ggt Gly gaa Glu gac Asp tcg	Gly 10 gtc Val ttc Phe cag Gln gac Asp ccg Pro 90 agc	Gln ttg Leu aga Arg atc Ile gtc Val 75 aag Lys ttc	Gly gtc Val gga Gly Val 60 cac His ctg Leu	Cys acg Thr agg Arg 45 ggc Gly gtg Val cca Pro	Gly acc Thr 30 cat His cag Gln cac His gta Val	Asp 15 gtg Val tac Tyr gcc Ala tcc Ser ctg Leu 95 tct	Arg ctc Leu tgg Trp ctg Leu ctg Leu s0 tac Tyr	96 144 192 240
176 177 178 180 181 182 184 185 186 188 190 192 193 194 196 197 198 200 201	Met 1 ggc Gly aac Asn gta Val gtg Val 65 cac His	ser gat Asp ctc Leu ccg Pro 50 gct Ala tgc Cys	ccc Pro gag Glu 35 gcc Ala gca Ala tac Tyr	ccg Pro cct Pro ccg Pro aag Lys gcc Ala ttt Phe	cag Gln 5 ggg Gly ctg Leu agg Arg aag Lys gtt Val 85 aca	Ala gac Asp gac Asp ctg Leu tct Ser 70 cgg Arg	Pro ctc Leu gag Glu ttt Phe 55 gtg Val gca Ala aca	cgt Arg gat Asp 40 ggt Gly agt Ser ggg	Asp agc Ser 25 ctc Leu ggt Gly gaa Glu gac Asp tcg	Gly 10 gtc Val ttc Phe cag Gln gac Asp ccg Pro 90 agc	Gln ttg Leu aga Arg atc Ile gtc Val 75 aag Lys ttc	Gly gtc Val gga Gly Val 60 cac His ctg Leu	Cys acg Thr agg Arg 45 ggc Gly gtg Val cca Pro	Gly acc Thr 30 cat His cag Gln cac His gta Val	Asp 15 gtg Val tac Tyr gcc Ala tcc Ser ctg Leu 95 tct	Arg ctc Leu tgg Trp ctg Leu ctg Leu s0 tac Tyr	96 144 192 240 288
176 177 178 180 181 182 184 185 186 188 190 192 193 194 196 197 198 200 201 202	Met 1 ggc Gly aac Asn gta Val gtg Val 65 cac His caa Gln	ser gat Asp ctc Leu ccg Pro 50 gct Ala tgc Cys gtg Val	ccc Pro gag Glu 35 gcc Ala gca Ala tac Tyr	ccg Pro cct Pro ccg Pro aag Lys gcc Ala ttt Phe cgg Arg	cag Gln 5 ggg Gly ctg Leu agg Arg aag Lys gtt Val 85 aca Thr	Ala gac Asp gac Asp ctg Leu tct ser 70 cgg Arg cga Arg	Pro Ctc Leu gag Glu ttt Phe 55 gtg Val gca Ala aca Thr	cgt Arg gat Asp 40 ggt Gly agt ser ggg Gly	Asp agc Ser 25 ctc Leu ggt Gly gaa Glu gac Asp tcg Ser 105	Gly 10 gtc Val ttc Phe cag Gln gac Asp ccg Pro 90 agc Ser	Gln ttg Leu aga Arg atc Ile gtc Val 75 aag Lys ttc Phe	gtc Val gga Gly gtg Val 60 cac His ctg Leu	Cys acg Thr agg Arg 45 ggc Gly gtg Val cca Pro gtg Val	Gly acc Thr 30 cat His cag Gln cac His gta Val cgc Arg 110	Asp 15 gtg Val tac Tyr gcc Ala tcc Ser ctg Leu 95 tct Ser	Arg ctc Leu tgg Trp ctg Leu ctg Leu gtg Yal	96 144 192 240 288
176 177 178 180 181 182 184 185 186 188 190 192 193 194 196 197 198 200 201 202	Met 1 ggc Gly aac Asn gta Val gtg Val 65 cac His caa	ser gat Asp ctc Leu ccg Pro 50 gct Ala tgc Cys gtg Val	ccc Pro gag Glu 35 gcc Ala gca Ala tac Tyr	ccg Pro cct Pro ccg Pro aag Lys gcc Ala ttt Phe cgg Arg	cag Gln 5 ggg Gly ctg Leu agg Arg aag Lys gtt Val 85 aca Thr	Ala gac Asp gac Asp ctg Leu tct ser 70 cgg Arg cga Arg	Pro Ctc Leu gag Glu ttt Phe 55 gtg Val gca Ala aca Thr	cgt Arg gat Asp 40 ggt Gly agt ser ggg Gly	Asp agc Ser 25 ctc Leu ggt Gly gaa Glu gac Asp tcg Ser 105	Gly 10 gtc Val ttc Phe cag Gln gac Asp ccg Pro 90 agc Ser	Gln ttg Leu aga Arg atc Ile gtc Val 75 aag Lys ttc Phe	gtc Val gga Gly gtg Val 60 cac His ctg Leu	Cys acg Thr agg Arg 45 ggc Gly gtg Val cca Pro gtg Val	Gly acc Thr 30 cat His cag Gln cac His gta Val cgc Arg 110	Asp 15 gtg Val tac Tyr gcc Ala tcc Ser ctg Leu 95 tct Ser	Arg ctc Leu tgg Trp ctg Leu ctg Leu gtg Yal	96 144 192 240 288
176 177 178 180 181 182 184 185 186 188 190 192 193 194 196 197 198 200 201 202 204	Met 1 ggc Gly aac Asn gta Val gtg Val 65 cac His caa Gln	ser gat Asp ctc Leu ccg Pro 50 gct Ala tgc Cys gtg Val gcc	ccc Pro gag Glu 35 gcc Ala gca Ala tac Tyr	ccg Pro cct Pro 20 ccg Pro aag Lys gcc Ala ttt Phe cgg Arg 100 caa	cag Gln 5 ggg Gly ctg Leu agg Arg aag Lys gtt Val 85 aca Thr cat	Ala gac Asp gac Asp ctg Leu tct ser 70 cgg Arg cga Arg	Pro Ctc Leu gag Glu ttt Phe 55 gtg Val gca Ala aca Thr	cgt Arg gat Asp 40 ggt Gly agt ser ggg Gly	Asp agc Ser 25 ctc Leu ggt Gly gaa Glu gac Asp tcg Ser 105 atc	Gly 10 gtc Val ttc Phe cag Gln gac Asp ccg Pro agc Ser ttc	Gln ttg Leu aga Arg atc Ile gtc Val 75 aag Lys ttc Phe atc	gtc Val gga Gly gtg Val 60 cac His ctg Leu tcg ser	Cys acg Thr agg Arg 45 ggc Gly gtg Val cca Pro gtg Val cag	Gly acc Thr 30 cat His cag Gln cac His gta Val cgc Arg 110 gcc	Asp 15 gtg Val tac Tyr gcc Ala tcc Ser ctg Leu 95 tct Ser tcc	Arg ctc Leu tgg Trp ctg Leu ctg Leu gtg Yal ttc	96 144 192 240 288

Input Set : A:\5718-111.app

206			115					120					125				
	cad	cad		Cad	CCC	agc	CCC	-	G2G	626	C2.C	++0		2 + ~	000	201	432
			-	_		Ser		_	_		_			_			432
210	OIII	130	AIG	OIII	110	561	135	Hec	Gili	1113	GIII	140	261	Met	FIO	1111	
	ata		cca	CCa	(722	gag		c++	~~~	+ ~+	~~~		ct c	a++	~~~	000	400
212	Val	Dro	Dro	Dro	Clu	Glu	Tan	Tou	yac	Cur	Clu	mb~	Ton	Tla	yac	Cag	480
	145	FIO	FIO	FIU	GIU.	150	ьеи	ьеи	ASP	Cys	155	1111	ьеи	TTE	ASP		
		++-		~~~			~+~								_4_	160	F 0.0
						aac											528
	ıyı	ьeu	Arg	Asp		Asn	Leu	GIN	гàг	_	Tyr	Pro	ьeu	Ата		Asn	
218					165				- 4 1	170					175		536
						gag											576
	Arg	тте	Ата		GIN	Glu	vaı	Pro		GIU	тте	гàг	Pro		Asn	Pro	
222				180					185					190			604
						ctg											624
	ser	Pro		Ser	GIN	Leu	GIN		Met	GIU	Pro	ьуs		Met	Phe	Trp	
226			195					200					205				670
						tat											672
	vaı		Ата	Arg	GTÀ	Tyr		сту	GIU	GTÀ			ьys	мет	HIS	Cys	
230		210					215					220					700
						atc											720
		vaı	Ата	Ата	ryr	Ile	ser	Asp	Tyr	Ala		Leu	GTÀ	Thr	Ата		
	225					230					235					240	7.00
						cag											768
	ьeu	Pro	nis	GIN		Gln	HIS	гуѕ	vaı		Pne	мет	vaı	Ser		Asp	
238					245					250				1	255		016
						cac											816
241	птѕ	Ser	Met	260	Pne	His	Ala	PLO		Arg	Ата	Asp	HIS	_	мет	Leu	
	+ - +	~ ~ ~ ~	+~~			~~~	+~~	~~~	265					270			0.64
						ccc Pro											864
245	ıyı	GIU	275	Gru	ser	PIO	тър	280	сту	СТУ	ser	Arg	285	ьeu	val	HIS	
	aaa	caa		+ ~~	cat	cag	ant.		at a	at a	act	~+ ~		+ ~+	~~~	~~~	912
						Gln											912
250	СТУ	290	пеп	тър	Arg	GIII	295	от у	val	ьеи	нта	300	1111	Cys	Ата	GIII	
	aaa		ata	atc	cas	gtg		000	a a a	at a	+ 02		200	229	c+ c	tag	960
						Val										Lay	300
	305	СТУ	Vai	116	Arg	310	пуэ	FIO	GIII	vaı	315	GIU	261	гу	пеп		
	<210)> <1	זד מי) NIO	. 1	210					213						
	<211																
	<212				נו												
					Ното	\ ear	niana	,									
	<400					Homo sapiens ⁄											
						Ala	Dro	Glu	Λcn	C1 17	Cln	C1.,	Cuc	C1.,	7 cn	7. ~~	
264	1	561	JGI	110	2111	1.17.0	110	J_U	лэр	10	GIII	GIY	Cys	оту	15	'-TA	
		Den	Dro	Dro	614	Asp	Leu	۸ra	Ser		Lou	Mal.	ጥሎው	ጥ ⊳ ∽		Lou	
267	O T Y	чэр	110	20	оту	лэр	neu	AL Y	25	val	neu	val	TIII	30	vaı	⊥eu	
	Asn	T.e.ii	Glu		T.e.ii	Asp	Glu	Δen		Phe	Δra	G1 17	Δra		ጥኒንም	Trn	
270	11011	JJ C U	35	110	neu	42h	JIU	40	TI C U	r 116	пта	GTA	45	1172	т ў т	тър	
	Val	Pro		Luc	Ara	Leu	Pho		Glv	Gla	Tlo	Va 1		Gla	ΔΙα	Tan	
212	Val	LIU	пта	пур	ALY	ьец	FILE	g T À	GTÀ	GIII	116	val	QT À	GTII	WIG	пеп	

Input Set : A:\5718-111.app

```
50
273
                                                60
275 Val Ala Ala Ala Lys Ser Val Ser Glu Asp Val His Val His Ser Leu
                        70
                                            75
278 His Cys Tyr Phe Val Arg Ala Gly Asp Pro Lys Leu Pro Val Leu Tyr
                    85
                                        90
281 Gln Val Glu Arg Thr Arg Thr Gly Ser Ser Phe Ser Val Arg Ser Val
                                   105
284 Lys Ala Val Gln His Gly Lys Pro Ile Phe Ile Cys Gln Ala Ser Phe
           115
                               120
                                                   125
287 Gln Gln Ala Gln Pro Ser Pro Met Gln His Gln Phe Ser Met Pro Thr
        130
                           135
                                               140
290 Val Pro Pro Pro Glu Glu Leu Leu Asp Cys Glu Thr Leu Ile Asp Gln
                       150
                                           155
293 Tyr Leu Arg Asp Pro Asn Leu Gln Lys Arg Tyr Pro Leu Ala Leu Asn
                   165
                                       170
296 Arg Ile Ala Ala Gln Glu Val Pro Ile Glu Ile Lys Pro Val Asn Pro
297
               180
                                   185
                                                       190
299 Ser Pro Leu Ser Gln Leu Gln Arg Met Glu Pro Lys Gln Met Phe Trp
           195
                               200
302 Val Arg Ala Arg Gly Tyr Ile Gly Glu Gly Asp Met Lys Met His Cys
                           215
305 Cys Val Ala Ala Tyr Ile Ser Asp Tyr Ala Phe Leu Gly Thr Ala Leu
306 225
                                           235
308 Leu Pro His Gln Trp Gln His Lys Val His Phe Met Val Ser Leu Asp
309
                   245
                                       250
311 His Ser Met Trp Phe His Ala Pro Phe Arg Ala Asp His Trp Met Leu
312
               260
                                   265
314 Tyr Glu Cys Glu Ser Pro Trp Ala Gly Gly Ser Arg Gly Leu Val His
           275
                               280
317 Gly Arg Leu Trp Arg Gln Asp Gly Val Leu Ala Val Thr Cys Ala Gln
318
       290
                           295
                                               300
320 Glu Gly Val Ile Arg Val Lys Pro Gln Val Ser Glu Ser Lys Leu
321 305
                       310
                                           315
325 <210> SEQ ID NO: 5
326 <211> LENGTH: 2050
327 <212> TYPE: DNA
328 <213> ORGANISM: Saccharomyces cerevisiae
330 <220> FEATURE:
331 <221> NAME/KEY: CDS
332 <222> LOCATION: (501)..(1547)
334 <400> SEQUENCE: 5
335 atatggacga agcccacgat aagcagcgta agaagtccgt gccgccacca agaatgatgg 60
337 tcacaaggtc catgaaacgc agaagatcca gctccccaac cctatccacc agccaaaacc 120
339 acaatagcga agacaatgat gacgctagcc atcggctgaa gcgtgcggcc aggaccatta 180
341 ttccctggga ggaactaaga cccgacactc tggaatctga gctgtgaaac gggcgtcctg 240
343 ctttttcatt ctacacaggc atatgtaaca gcagtgtata ggctatgtaa atcggcccaa 300
345 tcaacaaaca agcgttgctt attggacttg ctactacccc aacaaaggag agagcctttg 360
347 attgcatect eggaagagae ggeataaaca eegageetea teetacaatg aaaaaceaeg 420
```

VERIFICATION SUMMARY

DATE: 11/21/2002

PATENT APPLICATION: US/09/899,645A

TIME: 10:13:04

Input Set : A:\5718-111.app